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VOL. 23 NO. 32 August 10, 1973

Cooperative Economic Insect Report

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
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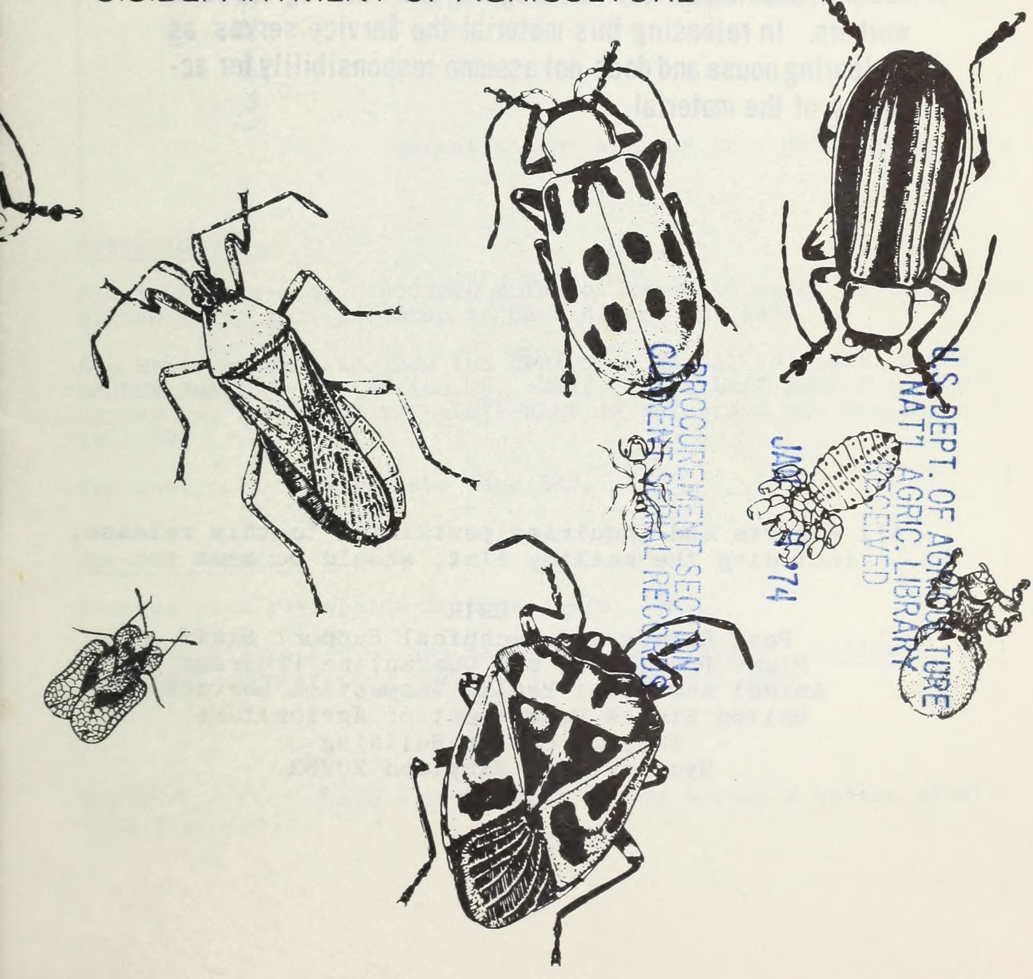

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
PEST SURVEY AND TECHNICAL SUPPORT STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 23 August 10, 1973 Number 32

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG continued to increase on grain sorghum in South Dakota, Nebraska, and Kansas. TOBACCO BUDWORM damaged tobacco in Kentucky; pest heavier on tobacco in North Carolina than in 1972. (pp. 528, 529).

CORN ROOTWORM adults heavy on corn and/or feeding on silks in South Dakota, Minnesota, and Kansas. A SOFT SCALE a problem on sugarcane in Florida for first time in 10 years. (pp. 531-532).

FALL ARMYWORM damaged grasses in 3 Southern States. (p. 532).

BOLL WEEVIL expected to increase in northern Alabama and southern Tennessee with continued favorable weather. (pp. 534-535).

GRASSHOPPERS moved into cropland from drying range areas in Utah and Idaho. RANGE CATERPILLAR economic on large rangeland area in northeastern New Mexico. (pp. 540-541).

Prediction

FALL WEBWORM presents potential for serious tree defoliation this fall in Ohio. (p. 537).

Detection

Single specimen of a NOCTUID MOTH not known to occur in the United States taken in light trap in Washington. (p. 543).

New State records include two APHIDS in Hawaii (p. 542). BROWN GARDEN SNAIL in New Mexico (p. 532), CEREAL LEAF BEETLE in New Jersey (p. 540), and a CHALCID WASP in Maine and New Hampshire (p. 539).

For new county records see page 543.

Special Reports

Records of a Few Aphids in Hawaii. (p. 542).

European References on the Alfalfa Weevil (Hypera postica Gyllenhal) (Phytonomus variabilis)). (pp. 546-548).

Reports in this issue are for week ending August 3 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING AUGUST 6

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

HIGHLIGHTS: Most Americans enjoyed a sunny week that stayed relatively cool for early August. Rain fell along a cold front that moved from the Nation's midsection to the Atlantic coast from about Wednesday through late week. The front, however, dawdled over the Carolinas and Georgia which received heavy rains into the weekend.

PRECIPITATION: While the West Coast States remained relatively rainless, most of the Nation's midsection between the Rockies and the Appalachians got rains varying from 0.30 to 0.80 inch, mainly in the form of scattered thunderstorms. The East, however, had large areas of 2 inches or more. Most of Florida and large sections of the Southern States as far north as Virginia had over 2 inches. An area in South Carolina had 6 inches. Most of New England and parts of New York and New Jersey had 2 inches. Monday, a front extended through the South from North Carolina through Georgia then north to Iowa then south through Texas. Mississippi and Texas got most of the rain associated with the front. Thunderstorms were active from Texas to Michigan. Mineral Wells, Texas, had 3.38 inches of rain in 6 hours Monday a.m., Junction over 3 inches by 6 p.m., Greenwood, Mississippi, 2.04 inches while Butler, Missouri had 2.50 inches. Thunderstorm activity calmed considerably Monday night except in Texas and Louisiana. Tuesday morning they erupted from the gulf to the Ohio Valley. Deyersburg, Tennessee, had 1.52 inches of morning rain; Cincinnati, Ohio 1.22 later. Wednesday, as dry air invaded the Nation's midsection, rain fell mostly on the Appalachians and the East. Air was, however, cool and considerable shower activity took place on the fringes of the cold air. Thursday, clouds covered most of the Nation's eastern quarter and by afternoon rain in excess of 3 inches had fallen

Weather continued on page 536.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMYWORM (*Pseudaletia unipuncta*) - MINNESOTA - Trace numbers found in most districts. Economic infestations unusual, but some have occurred. Heavy infestations this period in Becker County warranted treatments. Growers at Ponsford and Wolf Lake estimate some oat yields reduced by 50 percent. One grower estimated losses at $1,000 a day on fields of wheat, oats, and barley. Damage usually resulted in lost grain from head clipping. Although heavy infestations isolated, some larvae found in all fields. Controls applied to 4,000 acres in Becker County. Some control problems encountered but probably due to cool weather and/or improper application. Many larvae in last 2 instars. Growers in Becker, Clay, and Mahnomen Counties, and areas north where grain may still be more immature, should check fields frequently, particularly in areas of heavy lush undergrowth. (Minn. Pest Rpt.).

NORTH DAKOTA - *P. unipuncta* larvae present in late seeded small grain in Walhalla, Concrete, and Nash areas in Walsh and Pembina Counties. Up to 4 larvae per foot of row in barley in Forest River and Nash areas. (Kaatz). Up to 1 per square foot in lodged areas in late seeded barley in Bottineau County. (Brandvik). KANSAS - Caused some foliar damage in late-planted, 24-inch corn in Finney County. (Bell). IOWA - Of 42 larvae collected July 17 on corn in Black Hawk County, 18 were parasitized; 67 percent by an undetermined tachina fly and 33 percent by *Apanteles militaris* (a braconid wasp). (Iowa Ins. Sur.). MICHIGAN - Damaged oats in southwest Charlevoix County; larvae clipped heads on crop 1-2 weeks from harvest. Spraying underway. Damaged 14 acres of oats south of Chassell, Houghton County; grower plans control. (Rebman, Breyer).

CORN EARWORM (*Heliothis zea*) - UTAH - Severely injured sweet corn in Salt Lake, Davis, and Tooele Counties. (Burningham). OKLAHOMA - Averaged 16 per 10 sweeps in alfalfa in Major County, 1-7 per 10 sweeps in Noble, Kay, Grant, and Garfield Counties. Ranged 3-5 per row foot in peanuts checked in Marshall County, damaged foliage of 20 percent of plants in Bryan County. (Okla. Coop. Sur.). ARKANSAS - Infestations much below treatment level in corn surveyed in Hempstead, Lafayette, and Miller Counties. Ranged 0-1 larva per row foot. (Boyer).

TENNESSEE - *H. zea*, *Spodoptera ornithogalli* (yellowstriped armyworm) and *S. frugiperda* (fall armyworm) infested 90-acre cornfield in Coffee County; 20 percent of whorls infested. (Cagle). *H. zea* larvae infested corn ears in dough stage in all sections of State. (Gordon). Infested 10-50 percent of ears in dough stage in fields checked in central and western areas. Less than one percent of ears in predough stage infested. (Gordon, Bruer). KENTUCKY - *H. zea* larvae very light in Madison County corn. (Barnett). NORTH CAROLINA - Adults noted in 15 soybean fields in Wake and Harnett Counties. Larvae should appear in fields south of Wake County next 14 days. Open canopy fields should be checked more closely than closed canopy fields. (Hunt).

CORN LEAF APHID (*Rhopalosiphum maidis*) - OKLAHOMA - Light to moderate in most sorghum in Noble, Kay, Grant, Garfield, and Alfalfa Counties. Ranged up to 600 per plant in one Kay County field. Very heavy in Washita and Custer Counties; light to moderate in Marshall County. (Okla. Coop. Sur.). KANSAS - Continued to decrease on sorghum throughout State. (Bell). NEBRASKA - Decreased as sorghum began to head; ranged 500-600 per plant in 166 fields scouted in Clay County. (Gary, Keith). SOUTH DAKOTA - Heavy rains interrupted increase on developing leaves in head area of grain sorghum from Davison County to Charles Mix County during period ending July 27. Economic in some grain sorghum and required treatment near Letcher, Sanborn County, same period. (Kantack).

WISCONSIN - Rhopalosiphum maidis heavy in well-tasseled corn, leaves very sticky in some fields. Heavy on undersides of leaves as well as on tassels and silks in some fields. Lady beetle larvae numerous except in treated fields of sweet corn. (Wis. Ins. Sur.). MISSOURI - Light to moderate on corn in north-central and northeast areas. Field checked in north-central area observed with colonies on 92 percent of plants. (Thomas). Tasseling corn in northeast ranged 4-62 percent of plants infested. Lady beetles heavy in both areas. (Munson). INDIANA - Frequently moderate on corn still in whorl stage in southern districts. (Meyer). OHIO - R. maidis heavy on corn over most of State; however, tasseling exposed aphids to unfavorable weather, parasites, and predators. (Fox).

GREENBUG (Schizaphis graminum) - SOUTH DAKOTA - Continued to increase slowly on grain sorghum from Dawson County to Charles Mix County during period ending July 27. Increased slightly on grain sorghum during current period. Some heavier counts noted on untreated sorghum in northern Moody County; some activity on grain sorghum noted in Aurora County. (Kantack). NEBRASKA - Averaged 210 per sorghum plant in 166 fields checked in Clay County. Population peaked in some fields, increased slowly in others. Parasitism by Lysiphlebus sp. ranged 2-25 percent; apparently held greenbug below economic levels in several fields. Predators also present: Lady beetles, mostly Hippodamia convergens (convergent lady beetle), averaged 0.35 adult, 0.5 larva, and 1.9 eggs per plant; Chrysopa spp. (lacewings) averaged 0.09 adult, 0.05 larva, and 1.3 eggs per plant. (Gary, Keith).

KANSAS - S. graminum continued to increase on sorghum in southwest district. About 10 percent of fields scouted in Meade, Haskell, and Stevens Counties with above 1,000 per plant; same situation found in remaining counties of southwest district. Some fields in Stevens County had 3,000-5,000 per plant with severe plant damage. Numerous fields in southwest district treated. One field in Thomas County treated and infestations reported to be increasing in area. No significant parasitism by Lysiphlebus testaceipes (a braconid wasp) reported from western third of State. This parasite along with substantial populations of lady beetles destroyed moderate infestations of S. graminum in sorghum in Riley and Wabaunsee Counties. Damaging populations of S. graminum reported in sorghum in Smith County; however, heavy incidence of parasitism reported north of Smith County. Thus, parasitism may be substantial in this county as well, and greenbug problem in area will probably be short lived. No damaging greenbug infestations reported in any counties of central and south-central districts or in eastern districts. (Bell).

ARKANSAS - Survey for S. graminum on sorghum negative in Hempstead, Lafayette, and Miller Counties. (Boyer). OKLAHOMA - Generally moderate in grain sorghum checked in Noble, Kay, Grant, and Garfield Counties. Ranged 300-600 per plant on occasional plants in early planted fields, 60-200 on some plants in later-planted fields. Light parasitism (less than 1 percent) by Aphelinus sp. (a eulophid wasp) noted in 2 Garfield County fields. Light in

Washita and Custer Counties. (Okla. Coop. Sur.). NEW MEXICO - Schizaphis graminum still light throughout eastern sorghum-growing areas of State. Ranged 25-200 aphids on outer leaves of 40 percent of plants checked. (N.M. Coop. Rpt.).

POTATO LEAFHOPPER (Empoasca fabae) - WISCONSIN - Built up in new alfalfa seedings and some regrowth fields. Damage to new seedings reported in Trempealeau and Wood Counties in particular. Counts not generally heavy in northeastern or southwestern counties. Ranged 50-60 per sweep in some fields in Walworth, Fond du Lac, and Portage Counties, particularly in blooming fields. Counts heavy in some fields on lighter soil (up to 100 per sweep in Green County) but generally ranged much lighter. Heavy in commercial snap bean planting in Outagamie County; "hopperburn" appeared in some home garden potatoes. (Wis. Ins. Sur.). INDIANA - Populations generally decreased in soybeans and alfalfa in southern districts, but remained problem in alfalfa in northern districts. Heavy enough in some apple trees in Jackson County to cause yellowing and curling of leaves. (Huber, Meyer). OHIO - "Hopperburn" present on 85 percent and 45-50 percent of foliage in 2 commercial plantings, one each in Darke and Mercer Counties. Leaf browning and mortality common. Up to 24 adults and nymphs per potato plant observed in Darke County. Populations this season in untreated vegetables heavier than in recent years. (Sleesman).

SPOTTED ALFALFA APHID (Therioaphis maculata) - OKLAHOMA - Averaged 100 per 10 sweeps in alfalfa checked in Grant County. Very light (10 or less per 10 sweeps) in Noble, Kay, Garfield, and Major Counties. (Okla. Coop. Sur.). WISCONSIN - Still heavy in scattered alfalfa on lighter soil. Averaged about 50 per sweep in many fields in southern Sauk and western Dane Counties. Light counts noted as far north as Marinette and Oconto Counties. (Wis. Ins. Sur.).

TOBACCO BUDWORM (Heliothis virescens) - KENTUCKY - Damaged 8 percent of tobacco plants in Ohio County with 5-10 percent foliar loss. In McLean County, 18 percent of plants showed some feeding damage with 10-20 percent foliar loss. (Barnett). NORTH CAROLINA - Levels on tobacco heavier than in recent years. About 3 times as many fields at or above threshold than in 1972. General population level at least twice as heavy as each corresponding weekly period in 1972. (Tobacco Pest Mgt. Prog.).

TOBACCO HORNWORM (Manduca sexta) - KENTUCKY - Ranged 5-10 per 100 tobacco plants in Christian County. Populations very light in Morgan County. (Barnett, Jones).

TOMATO HORNWORM (Manduca quinquemaculata) - UTAH - Caused extensive defoliation to tomatoes and some potatoes in Salt Lake and Davis Counties. (Burningham).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - MISSOURI - Egg masses noted on 10 percent of corn just beginning to tassel in north-central area. Leaf feeding noted on 18 percent of plants in one field. (Thomas). Egg masses ranged 0-18 per 100 plants in northeast area. Adults still active and eggs hatching in area. (Munson). KANSAS - Flights of first-generation moths leveled off in Brown County, increased in Republic County. Moths emerged in Finney County; in cornfields in area, many larvae have not yet reached pupal stage. (Bell). IOWA - Second-generation adult flight increased in central area; expected to peak August 5-10. Adults present in grass near cornfield margins at about 2 per square meter. More mated than virgin female moths collected at light traps. Continued cool nights expected to further decrease economic potential of pest. (Iowa Ins. Sur.).

MINNESOTA - *O. nubilalis* pupae heavy but adult emergence just beginning. Second-generation moths increased only in blacklight trap at Shakopee, Scott County. (Minn. Pest Rpt.). WISCONSIN - Second moth flight well underway, although cooler temperatures this period tended to reduce activity. Moths heavy in high grasses and margins of cornfields in western Dane and southeastern Sauk Counties. Dissection of corn plants at Spring Green, Sauk County, showed all borers in pupal stage or emerged. Populations in northeastern counties heavier than normal this season; problems with control reported by some canners of sweet corn. One treated field near Black Creek, Outagamie County, had 20 percent of ears infested, mostly by second-instar larvae. Very heavy moth activity expected with first warm evenings. (Wis. Ins. Sur.).

ILLINOIS - First-generation *O. nubilalis* infestations continued very light; averaged less than one damaged plant per 100 in 3 counties in northeast and east districts. Stalk dissections July 31 in Ogle County showed 4 percent larvae, 20 percent pupae, and 76 percent emergence. One fresh egg mass found. (Ill. Ins. Rpt.). MICHIGAN - Second-generation moth activity increased. Growers of peppers, sweet corn, and snap beans should begin recommended spray schedules. (Sauer). DELAWARE - Eggs increased significantly, averaged 1 mass per 3 plants in late-planted sweet corn in Sussex County. Adults heavy in blacklight trap collections in most areas. (Burbutis, Davis).

SOUTHWESTERN CORN BORER (*Diatraea grandiosella*) - KANSAS - First-generation moths flying in Stafford County; late-instar larvae infested about 1 percent of plants in Morton County cornfield. (Bell).

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) - NORTH CAROLINA - Severely damaged young grain sorghum (8 inches tall or less), soybeans, and garden beans in scattered Coastal Plain fields and gardens. One 6-acre Cumberland County grain sorghum field noted with 95 percent loss. Soybeans planted by broadcast in this field. (Jernigan, Weaver).

FALL ARMYWORM (*Spodoptera frugiperda*) - OKLAHOMA - Heavy in sorghum in Jackson, Washita, and Custer Counties. Light to moderate in Alfalfa, Noble, Kay, Grant, Garfield, Osage, Craig, and Marshall Counties. (Okla. Coop. Sur.). ARKANSAS - Some Miller County late sorghum fields treated. Larvae fed on 6 to 8-inch plants which is atypical. Infestation usually occurs in whorls. (Boyer). ALABAMA - Damaging populations occurred in two young cornfields in Bibb and Lee Counties. (Owens, Strawn).

WESTERN BEAN CUTWORM (*Loxagrotis albicosta*) - KANSAS - Blacklight trap catches indicate flight in Greeley County; 346 moths trapped during nights of July 23 and 26. Similar heavy flight in same area about one week earlier than this in 1972 was peak flight for that year. (Bell).

CORN ROOTWORMS (*Diabrotica* spp.) - SOUTH DAKOTA - *D. longicornis* (northern corn rootworm) increased on corn. Near Garretson, Mennehaha County, adults per plant ranged 2-3 in fields treated at planting time and 10-12 in untreated fields. Adults per plant ranged 10-12 near Trent in southern Moody County, 10-15 in some fields south of Madison, Lake County. At Oral, near Hot Springs, Fall River County, in western part of State, counts ranged 8-10 adults per corn plant. Most beetles in all fields examined were *D. longicornis*, except for one field near Garretson where population was 50 percent *D. virgifera* (western corn rootworm) and 50 percent *D. longicornis*. With corn silking well advanced and heavy adult populations present, damage to silks and interference with pollination anticipated in some areas. Adult controls will probably be necessary in these areas. (Jones).

MINNESOTA - *Diabrotica* spp. adults beginning to feed on corn silks. Preliminary results of survey in 5 southeast district counties showed about half as many adults present in 4 counties and about as many in one county as present in 1972. (Minn. Pest Rpt.). WISCONSIN - Adult emergence complete at Arlington, Columbia County, August 1. This is unusually early in State; indicates early and prolonged egg-laying period this season; would appear to have important economic implications for 1974. Mating currently underway. Adult populations generally light, but exceptionally heavy in small percentage of cornfields. Adults averaged about 7 per plant in field near Fredonia, Ozaukee County; lodging severe within field. Averaged 4 per plant with no lodging in field in central Rock County. Adults virtually absent in many fields; less than one per plant in average field of corn. (Wis. Ins. Sur.).

IOWA - *Diabrotica* spp. adults, predominantly *D. virgifera*, averaged 10 per plant on second-year corn in Worth County. (Iowa Ins. Sur.). KANSAS - Heavy *Diabrotica* spp. adult infestations caused heavy silk pruning and poor kernel set in some northeast district fields; some treating done. In cornfields of southwest district, adults of *D. virgifera* averaged about 2 per plant overall, but in individual fields averages ranged up to 10 per plant. An unusual case of severe root damage due to larval feeding found in field of sorghum in Thomas County; this field planted to corn in 1972. (Bell). KENTUCKY - *D. longicornis* and *D. undecimpunctata howardi* (southern corn rootworm) continued to feed on corn silks in most areas. Ranged 1-2 per ear in western areas. (Barnett).

WESTERN CORN ROOTWORM (*Diabrotica virgifera*) - INDIANA - Larval damage to corn in northwest district heavier than any past year. Controls applied in several locations as far east as Elkhart County. (Meyer). Adult collected in Huntington County August 1 by J. Ramsey. Adults collected in Clinton County July 31 by M. Busching. These are new county records. (Turpin). MICHIGAN - Adults collected on corn in Columbia Township, Jackson County, and Cambridge Township, Lenawee County, July 31 by D. Kaiser. Determined by R.J. Sauer. These are new county records. (Sauer). COLORADO - Ranged 2-6 adults per plant in cornfields in Mesa County. Some brace roots weakened, some lodging noted. Mostly in fields in corn 3 years and no controls used. (Bulla).

NORTHERN CORN ROOTWORM (*Diabrotica longicornis*) - OHIO - Adults active in corn over most of State, although counts light and difficult to detect. Infestations heaviest in Mercer County (3-7 adults per ear, 10-15 percent of ears displayed complete clipped silks) and Tuscarawas County (0-5 adults per ear, less than 1 percent of ears with clipped silks). (Fox). MICHIGAN - Adults active in corn in Jackson and Lenawee Counties. (Sauer).

CHINCH BUG (*Blissus leucopterus leucopterus*) - MISSISSIPPI - Caused heavy damage to corn, millet, and other grass crops in Forrest, Lamar, and Amite Counties. Adults and nymphs destroyed some fields. (Robinson).

A SOFT SCALE (*Pulvinaria elongata*) - FLORIDA - Heavily infested and damaged 300-acre patch of nearly mature sugarcane in Okeechobee region of Palm Beach County; caused yellowing and stunting in localized area. This is first time in 10 years this scale insect has become a problem. (Fla. Coop. Sur.).

TURF, PASTURES, RANGELAND

BROWN GARDEN SNAIL (*Helix aspersa*) - NEW MEXICO - Immatures collected in yard at residence in Albuquerque, Bernalillo County, June 12, 1973, by D.E. Bartholf. Determined by V.H. Owens. Confirmed by W.J. Byas. This is a new State record, and has been determined to be an established infestation. (N.M. Coop. Rpt.).

FALL ARMYWORM (*Spodoptera frugiperda*) - ALABAMA - Heavy and damaged several newly established centipede grass lawns in Linden, Marengo County. (Miller). MISSISSIPPI - Larval migration into pastures heavy in Issaquena County. Growers should watch for this pest. Could be major problem due to heavy rainfall. (Robinson). ARKANSAS - Infestations economic, some pastures treated across southern part of State. Ranged 10-15 larvae per square foot in one pasture of Coastal Bermuda grass in Miller County. (Boyer).

SAGEBRUSH DEFOLIATOR (*Aroga websteri*) - IDAHO - Caused much defoliation of sagebrush (*Artemisia tridentata*) stands in an area north of Holbrook, Oneida County. (Knowlton).

SOUTHERN CHINCH BUG (*Blissus insularis*) - MISSISSIPPI - Damaged St. Augustine turf in southern counties. Heavy in Pike County. (Robinson).

SAY STINK BUG (*Chlorochroa sayi*) - NEVADA - Heavy on rangeland and migrated across highway in lower Railroad Valley, Nye County. (Zoller).

BLUEGRASS BILLBUG (*Sphenophorus parvulus*) - UTAH - Increased, caused extensive damage to lawns in Salt Lake and Davis Counties. (Burningham, Knowlton).

GRASSHOPPERS - MINNESOTA - Some reverse migration from cut grains to roadsides observed in northwest district. Late instars of *Melanoplus bivittatus* ranged up to 12 per square yard in Norman County ditch banks and roadsides. *M. bivittatus* egg laying observed in Norman and Marshall Counties. Counts heavy on edge rows of corn and soybeans near Wheaton, Traverse County;

third instars to adults ranged 12-36 per square yard. (Minn. Pest Rpt.). KENTUCKY - Grasshopper populations of various species very heavy for time of year. Counts by county per hundred sweeps as follows: Caldwell 500, Hopkins 425, Ohio 420. (Barnett).

FORAGE LEGUMES

PEA APHID (Acyrthosiphon pisum) - COLORADO - Built up on second-cutting alfalfa in Mesa County. Ranged 200-300 per 10 sweeps. (Bulla). UTAH - Averaged 150 per 10 sweeps in early bloom alfalfa at North Logan, Cache County. (Davis). NEVADA - Averaged 200 per sweep in spotted, localized areas in alfalfa seed fields at Orovada, Humboldt County. (Stitt).

LYGUS BUGS (Lygus spp.) - NEVADA - Averaged 7 nymphs and 7 adults per sweep in Reese River, Lander County, alfalfa seed fields. (Hilbig). Treatments underway in alfalfa seed fields in Humboldt, Lander, and Pershing Counties; poor results reported in Pershing County. (Hilbig et al.).

SAY STINK BUG (Chlorochroa sayi) - NEVADA - Large numbers of adults and nymphs moved into alfalfa from rangeland in Smith Valley, Lyon County. (Martinelli, Pursel).

TARNISHED PLANT BUG (Lygus lineolaris) - OKLAHOMA - Ranged 1-7 per 10 sweeps in alfalfa in Noble, Grant, Kay, Garfield, and Major Counties. (Okla. Coop. Sur.)

FALL ARMYWORM (Spodoptera frugiperda) - ARKANSAS - Infestations of this species and Loxostege rantalis (garden webworm) required control in some Miller County alfalfa fields. Field of haygrazer (a forage crop) required treatment in Pulaski County. Coastal Bermuda grass hay crops treated in southwestern area. (Boyer).

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Two adults taken in 12-inch alfalfa 3 miles north of Tucumcari, Quay County. This is a new county record. (N.M. Coop. Rpt.). NORTH DAKOTA - Larvae still present in alfalfa, averaged 6 per 100 sweeps in McKenzie County. (Knudsen).

SOYBEANS

GREEN CLOVERWORM (Plathypena scabra) - OHIO - Populations heavier than usual on soybeans this season. Reported from Clinton, Seneca, Fayette, Scioto, and Warren Counties. Economic levels not yet reached, but emergency sprays initiated in Warren, Fayette, and Scioto County fields. (Blair). Leaf feeding occurred on 25 percent of plants in marginal 3-6 rows of 2 commercial plantings in Williams and Pauling Counties. (Fox). IOWA - Larval infestations variable. Counts in Pottawattamie and Mills Counties ranged 2-50 per row foot in fields in Missouri River bottom. All larval instars present. Some treatments applied. Central area infestations variable but mostly declining. (Iowa Ins. Sur.).

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) - KENTUCKY - Destroyed 25 percent of Christian County field. Controls applied. (Daviess).

BLACK CUTWORM (Agrotis ipsilon) - MISSISSIPPI - Destroyed stand of 200+ acres of young soybeans in Sharkey County. (Robinson).

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Adults and larvae continued to cause spotty damage in Tidewater area; nearing recommended treatment level on 40-acre field in King and Queen County. Many fields sprayed in Lancaster and Richmond Counties. (Allen et al.).

LOCUST LEAF MINER (Xenochalepus dorsalis) - TENNESSEE - Adults damaged small section of Grundy County soybean field. (Chance). Annually damages locust trees in all sections of State; this is second known occurrence of damage to soybeans. First recorded damage occurred in White County in 1971. (Gordon, Bruer).

GRASSHOPPERS - KENTUCKY - Various species averaged 2.5 per plant in no-till soybeans in Lyon County. Ranged 2-3 per plant in most fields in Lyon and McCreary Counties. (Barnett).

PEANUTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Infested 39 percent of plants in peanut field checked in Grady County, 21 percent in field in Marshall County. (Okla. Coop. Sur.).

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Infested 25 percent of terminals in field in Grady County. (Okla. Coop. Sur.).

COTTON

BOLLWORMS (Heliothis spp.) - TENNESSEE - Second-generation immatures infested most fields. Ranged 1-8 per 100 terminals in infested fields. Further population increase expected. (Locke). ALABAMA - Moth flights and egg laying increased to heavy statewide. Numerous farms in all sections experiencing control difficulty and increasing problems. (McQueen). MISSISSIPPI - Remained light in cotton over State. Light traps indicate heavy moth flight underway. (Robinson). ARKANSAS - Infestations of H. zea (bollworm) and H. virescens (tobacco budworm) lighter than normal in southwest area. Some fields treated. First treatments later than normal for area. Bollworms necessitated inital treatment in almost all fields. In some fields, some bollworms "broke through" and larvae large enough for determination with hand lens present. Of 29 larvae taken in untreated fields, 8 were H. virescens. This infestation (27 percent) heavier than normal in untreated cotton. Adult activity increased in some areas. As noted in past years, sugarlines detected moth flights more effectively than light traps until early to mid-August. (Boyer). OKLAHOMA - H. zea eggs ranged up to 38 per 100 terminals, damaged squares up to 10 percent, and up to 9 larvae per 100 terminals in Jackson, Greer, Harmon, Kiowa, and Tillman Counties. Larvae averaged 20 and eggs 25 per 100 terminals in Grady County. Larvae ranged up to 90 per 100 terminals with heavy numbers of eggs in some fields in Wagoner County. (Okla. Coop. Sur.).

BOLL WEEVIL (Anthonomus grandis) - OKLAHOMA - Percent punctured squares ranged up to 50 in Caddo County, 10 in Washita County, 20 in Bryan County, 14 in Wagoner County, and up to 11 in southwest area with highest counts in Jackson County. (Okla. Coop. Sur.). ARKANSAS - Infestations in southwestern area ligher than normal for time of year. Traditionally an area of heavy infestations with treatment often necessary in early July. Very few fields infested at or above treatment level at end of July. (Boyer). MISSISSIPPI - Punctured squares ranged 0-20 percent in 2,000 acres in Noxubee County. Second-generation emergence from squares about complete. Still light over most of State. (Robinson).

ALABAMA - Percent of squares punctured by *Anthonomus grandis* ranged 10-50 in south, central, and most of mountain locations in northern area. Controls general. Valley cotton of northern area averaged 2-15 percent with second "hatchout" near. Weather extremely favorable. (McQueen). TENNESSEE - First-generation "hatchout" occurred, conditions ideal for increase. Average of 7 percent punctured squares noted. Heavy increase expected in southern tier of counties if weather conditions remain stable. (Locke).

COTTON FLEAHOPPER (*Pseudatomoscelis seriatus*) - OKLAHOMA - Averaged 50 per 100 terminals in Washita and Caddo Counties; ranged up to 24 in southwest area with heaviest counts in Harmon County. Light in Bryan County. (Okla. Coop. Sur.).

TARNISHED PLANT BUG (*Lygus lineolaris*) - ALABAMA - Adults and nymphs disappeared from several thousand treated acres in northern area. Damage remains but cotton producing and setting new boll crop. Untreated fields still infested. (McQueen).

TOBACCO

GREEN PEACH APHID (*Myzus persicae*) - KENTUCKY - Alates heavy on tobacco in central Fayette and western Ohio Counties. Appearance on tobacco about 14 days later than usual. Ranged 30-40 per leaf at one Ohio County location. (Barnett, Jones).

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - KENTUCKY - Counts per tobacco plant by county as follows: Laurel 5-10, Barren 35-40, Fayette 15-20. (Barnett, Jones).

YELLOWSTRIPED ARMYWORM (*Spodoptera ornithogalli*) - KENTUCKY - Problem in Christian County tobacco. (Daviess).

MISCELLANEOUS FIELD CROPS

SUNFLOWER BEETLE (*Zygogramma exclamationis*) - NORTH DAKOTA - Controls still being applied in Pembina County. Up to 30 larvae per sunflower plant. (Kaatz). MINNESOTA - Decreased to trace numbers on sunflower in northwest district. Very little leaf damage noted, very little expected. (Minn. Pest Rpt.).

AN APHID (*Micromyzus formosanus*) - ARIZONA - Collected from home garlic planting at Bowie, Cochise County, April 21, 1973, by S. Kozloski. Determined by L.M. Russell. This is a new State record. (Ariz. Coop. Sur.).

POTATOES, TOMATOES, PEPPERS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - VIRGINIA - Third-brood moth emergence underway on Eastern Shore; 223 moths taken in blacklight traps July 27-31. Growers of peppers and other crops should shorten treatment period to 4-5 days in Accomack and Northampton Counties. (Hofmaster).

GREEN PEACH APHID (*Myzus persicae*) - MICHIGAN - Moderate to heavy in several fields of peppers and potatoes in Monroe County. (Sauer). OREGON - Alates appeared in large numbers in potato plantings at Harper, Malheur County. (Burr).

BEANS AND PEAS

PEA APHID (*Acyrthosiphon pisum*) - WISCONSIN - Averaged 100+ per sweep of peas in Outagamie and Calumet Counties; averaged 500+ per sweep in some Fond du Lac County peas. (Wis. Ins. Sur.).

Weather of the week continued from page 526.

in New England. Excessive rains hit New Jersey causing flooding, loss of life, and destruction of property. The Passaic River reached record heights at Chatham, New Jersey. Thunderstrom activity erupted down the Atlantic coast through Georgia and Texas. Areas in South Carolina got over 4 inches while Pensacola, Florida, and Houston, Texas, got 2.50 inches. On Friday, most of the Nation's rain hit the Southeast with the Carolinas getting most--Florence, South Carolina, 5.55 inches, Hickory, North Carolina, 2.04 inches. Thunderstorms erupted in isolated areas of the California deserts causing temporary road closings there because of high water. Saturday was sunny over almost every place in the Nation with some rain in the Carolinas and Georgia, and Sunday stayed mostly sunny too. Abundant sunshine gave millions of weekenders at most Atlantic beaches the best weekend yet.

TEMPERATURE: Early in the week a Canadian High sent a sprawling mass of cool, dry air into the Nation's midsection as far south as the southwest Plains. Many record lows were either broken or tied during the middle of the week. Most of the Nation east of the Rockies averaged below normal. A large area extending from west Texas north into the central Corn Belt and east into the Deep South averaged from 6 to 9 degrees below norm. The area around St. Louis, Missouri, averaged 12 below normal. In the West, a large part of the northwest drought area plus desert areas in Nevada, California, and Arizona averaged from 6 to 9 degrees above norm. Monday saw temperatures in the 80's to low 90's throughout most of the Nation. Tuesday, generally hot temperatures hit the West and Northwest. At 8 p.m., Havre, Montana, had 96 degrees and Blythe and Needles, California, 107 degrees. Tuesday night, a large mass of Canadian air began to invade the Nation's center and the cool 40's set in over the upper Mississippi Valley. Dry air already present throughout the Midwest heightened the effect of cooling. Thursday morning, record lows were broken at Springfield, Missouri, 53 degrees; Omaha, Nebraska, 53 degrees; and North Platte, Nebraska 53 degrees. Lows were equaled at Duluth, Minnesota, 42 degrees, and Midland, Texas, 61 degrees. Midwestern temperatures generally rose to the 70's and 80's but they fell again that night. The record low was equalled at Springfield, Missouri, 53 degrees. Further south, record lows were broken--Shreveport, Louisiana, 65 degrees; Tulsa, Oklahoma, 56 degrees; and Fort Smith, Arkansas, 57 degrees. Lowest of the morning was at Alamosa, Colorado, 39 degrees. Saturday morning set more records: Lake Charles, Louisiana 67 degrees and Midland, Texas, 61 degrees. Saturday was on the cool side for most of the Nation and Sunday morning lows were also records--Midland, Texas, 61 degrees; San Antonio, 65 degrees. While the South and Texas had cool weather the Northwest had a heat wave. Sunday temperatures rose to 98 degrees at Miles City, Montana, and 99 degrees at Medford, Oregon.

DECIDUOUS FRUITS AND NUTS

BEAN THRIPS (*Caliothrips fasciatus*) - CALIFORNIA - Caused severe foliar damage to walnuts in Lower Lake area of Lake County. Damage occurred in localized area of 1,000 acres of walnuts. All lower branches silvered but tips and centers not damaged. (Cal. Coop. Rpt.).

TWOSPOTTED SPIDER MITE (*Tetranychus urticae*) - COLORADO - Increased during first 14 days of July; 2-40 per leaf with some bronzing in Mesa County fruit orchards. (Bulla).

PEARLEAF BLISTER MITE (*Phytoptus pyri*) - IDAHO - Infestation extensive in apples and pears in many northern areas. Heavy enough (when coupled with current drought) that much defoliation occurred July 23-30. (Gittins).

PEAR RUST MITE (*Epitrimerus pyri*) - CALIFORNIA - Very severe on pears throughout Lake County. Has been more prevelant in all pear-growing areas in northern area this year. (Cal. Coop. Rpt.).

ORNAMENTALS

TWOSPOTTED SPIDER MITE (*Tetranychus urticae*) - FLORIDA - Extremely heavy infestation of 25 percent of 5,000 cuttings of croton (*Codiaeum variegatum*) in nursery in Homestead, Dade County; mites congregated at leaf tips of cuttings held under mist-providing machine. (Fla. Coop. Sur.).

AN ARMORED SCALE (*Aspidiotus spinosus*) - FLORIDA - Adults collected from *Callicarpa americana* at Brighton, Highlands County, March 15. This is a new county record. (Fla. Coop. Sur.).

AN APHID (*Masonaphis lambersi*) - WASHINGTON - Taken from rhododendron at residence in Yakima County, July 30. This is a new county record. (Landis).

HOLLYHOCK WEEVIL (*Apion longirostre*) - NEW MEXICO - Adults taken from backyard planting in Roy, Harding County, July 28. This is a new county record. (N.M. Coop. Rpt.).

FOREST AND SHADE TREES

FALL WEBWORM (*Hyphantria cunea*) - KENTUCKY - Very heavy in Morgan and Breathitt Counties. Nests averaged 2 per mile in Wolfe County. (Barnett, Nordin). OHIO - First-generation more prevalent than for past 3 summers. Defoliation of crab apple, walnut, maple, oak, sweetgum, and cherry conspicuous. Potential exists for serious defoliation by second-generation larvae this fall. (Nielsen).

FALL CANKERWORM (*Alsophila pometaria*) - PENNSYLVANIA - Damaged oak and other hardwoods in Somerset and Fayette Counties. Moderately defoliated about 5,000 acres in Mt. Davis area, southern Somerset County. This is increase of about 1,000 acres but decrease in severity from 1972. Heavily defoliated 380 acres near Summit, Fayette County. No defoliation noted in area in 1972. (Wallace).

FOREST TENT CATERPILLAR (Malacosoma disstria) - PENNSYLVANIA - Damaged mostly red oak. Population collasped in Somerset, Fayette, and Westmoreland Counties. Only 50 acres moderately to heavily defoliated in Somerset County, tree mortality ranged 1-5 percent over 550 acres in Somerset County near Fayette County border. This pest believed to be cause of 2,250 defoliated acres in past two years. (Wallace).

ELM LEAF BEETLE (Pyrrhalta luteola) - MISSISSIPPI - Damage to elms still heavy Statewide. (Robinson). TENNESSEE - Caused severe defoliation of elm trees in western area. (Emerson, Locke). MISSOURI - Complete defoliation of many Siberian elms occurred throughout southern and central areas. Heavy populations present statewide. (Craig).

A SAWFLY (Caliroa liturata) - KENTUCKY - Severely skeletonized oak trees over 4-square-mile area in Pulaski County. (Barnett, Scheibner). See CEIR 23(30):498 for name change. (PPQ).

LOCUST LEAFMINER (Xenochalepus dorsalis) - KENTUCKY - Severely defoliated most locust trees in State. Heaviest damage noted in Hardin, Grayson, Madison, Franklin, Nelson, Shelby, and Henry Counties. (Barnett).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Total of 340 cases reported from continental U.S. during period July 22-28 as follows: Texas 85, New Mexico 52, Arizona 201, California 2. Total of 552 cases confirmed from Mexico. Number of sterile flies released this period totaled 137,349,600 as follows: Texas 96,629,000; New Mexico 10,086,400; Arizona 29,104,200; California 1,530,000. Total of 43,205,400 sterile flies released in Mexico. (Anim. Health).

FACE FLY (Musca autumnalis) - NORTH CAROLINA - Infested cattle in Durham, Person, and Caswell Counties. Ranged 5-75 per head on 150 head in 3 herds. These are new county records. (Hunt). MISSISSIPPI - Found for first time since 1969 in Oktibbeha County; adults ranged 1-2 per face. Averaged 15 per face in Monroe and Chickasaw Counties. (Robinson). TENNESSEE - Ranged 25-50 per head in Giles County. (Giles). KENTUCKY - Adults averaged 6 per animal in Hopkins County. Pinkeye reported worse this year than in 1972 in Christian County. Adults ranged 30-40 per animal in Fayette County. (Barnett). INDIANA - Adults averaged 11.7 per face on untreated, mature cows (range 0-25), and ranged 15-25 on calves on farm in Grant County. (Dobson). ILLINOIS - Averaged 40 per head on one untreated Grundy County beef herd. (Ill. Ins. Rpt.). WISCONSIN - Ranged light to moderate on livestock in Chippewa and Rock Counties; heavy in Bayfield County. Controls underway in all areas. (Wis. Ins. Sur.). IOWA - Ranged 10-90 (average 27) per head on untreated cattle in Story County. (Iowa. Ins. Sur.). OKLAHOMA - Still heavy on cattle in Craig County. (Okla. Coop. Sur.).

MOSQUITOES - OHIO - Aedes sollicitans collected in vicinity of McArthur, Vinton County, July 26, 1973, for a new county record. Breeding observed in salt water in oil field at this locality. (Ohio Dept. Health). WISCONSIN - Still heavy near woodlands and wetlands in most counties. (Wis. Ins. Sur.). MINNESOTA - Populations decreased throughout Metropolitan Mosquito Control District. Rains of July 29 resulted in light brood, primarily Aedes vexans.

Many *Aedes vexans* breeding sites dried before development completed. Moderate increase of adults expected about August 10-12. *Coquillettidia perturbans* continued important component of adult collections. (Minn. Pest Rpt.). UTAH - Mainly *Aedes dorsalis*, very heavy around range waterhole, 17 miles southwest of Snowville, Box Elder County; very annoying in Cache County generally and upper Skull Valley of Tooele County. (Knowlton, Gordon).

HORN FLY (*Haematobia irritans*) - MISSISSIPPI - Averaged 200 per head on cattle in Oktibbeha, Monroe, Clay, and Noxubee Counties. (Robinson). TENNESSEE - Decreased in Giles County. Ranged 75-150 per head. (Watson). Ranged 50-100 per head on treated Dyer County herd. (Stafford). ILLINOIS - Averaged 80 per head on untreated Grundy County beef herd. (Ill. Ins. Rpt.). IOWA - Ranged 30-400 (average 157) per head on untreated cattle in Story County. (Iowa Ins. Sur.). OKLAHOMA - Ranged 475-600 per head on cattle checked in Payne County. Heavy in Craig County, moderate in Pawnee, Noble, Garfield, and Grant Counties. (Okla. Coop. Sur.).

STABLE FLY (*Stomoxys calcitrans*) - ILLINOIS - Averaged 56 per head on one untreated Grundy County beef herd. (Ill. Ins. Rpt.). WISCONSIN - Variable according to locality, moderate in most areas. Annoyance to cattle increased on hot days. Treatment underway in most areas. (Wis. Ins. Sur.).

A COMBFOOTED SPIDER (*Latrodectus variolus*) - MICHIGAN - Female collected under porch of residence in Lake City, Missaukee County, July 25 by R. Yount. Determined by V. Vande Pol. Confirmed by R.J. Sauer. This is a new county record. (Sauer).

MEALY PLUM APHID (*Hyalopterus pruni*) - NEW JERSEY - Heavy flights occurred over Hoboken, Hudson County, between 12 p.m. and 4 p.m. August 3. Main masses 200-300 feet high, but enough aphids at ground level to annoy persons on streets by getting into ears, noses, and eyes. This aphid reproduces on grasses during summer and on *Prunus* spp. during winter. Determined by L.M. Russell. (Lipes).

BENEFICIAL INSECTS

A CHALCID WASP (*Brachymeria intermedia*) - NEW HAMPSHIRE - Adults collected near spruce and fir trees infested with *Choristoneura fumiferana* (spruce budworm) July 19, 1973, by A.H. Mason. Spruce and fir trees in yard of residence in Concord, Merrimack County. (Mason). MAINE - Emerged from *Porthetria dispar* (gypsy moth) larvae collected at Freyburg, Oxford County, during July 1971. Collected by D.E. Leonard. (Leonard). Both determinations by B.D. Burks. These are new State records for this imported parasite of *P. dispar*. (PPQ).

A BRACONID WASP (*Microctonus aethiops*) - MICHIGAN - To date this adult parasite of *Hypera postica* (alfalfa weevil) released in Arenac, Berrien, Branch, Cass, Clinton, Hillsdale, Ingham, Ionia, Isabella, Kent, Kalamazoo, Lapeer, Lenawee, Livingston, Mecosta, Montcalm, Muskegon, Newaygo, Osceolo, Ottawa, Saginaw, St. Clair, Sanilac, Shiawasee, and Washtenaw Counties. (Sauer).

A SAPYGID WASP (Sapyga pumila) - NEVADA - Heavily parasitized Megachile rotundata (alfalfa leafcutter bee) at Jungo and Orovada, Humboldt County, and Lovelock, Pershing County. Peak emergence occurred about mid-July, but numerous wasps still present. Heaviest populations present in Humboldt County where some growers estimated up to 500 percent increase over 1972 level. (Stitt et al.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CEREAL LEAF BEETLE (Oulema melanopus) - NEW JERSEY - Adults collected on oats at Baptistown, Kingwood Township, Hunterdon County, June 12, 1973, by L.R. Pealar and G.J. Farrell. This is a new State record. Larvae collected on oats in Warren County July 3 and July 6, 1973, by R. Pordan. This is a new county record. Adults and larvae determined by R.E. White. (PPQ). PENNSYLVANIA - Two adults taken in 20 sweeps in each of 4 fields at Williamsport area, Lycoming County, on mature oats. Larvae noted 14 days earlier in Tioga and Potter Counties. (Martin).

EUROPEAN CHAFER (Amphimallon majalis) - OHIO - Single adult found in large railroad switching yard in Huron County July 18. Treatment applied. This is a new county record. (Roach).

GRASSHOPPERS - SOUTH DAKOTA - Activity increased in Butte, Dewey, Brown, Walworth, Haakon, and Hughes Counties. (Jones). NEW MEXICO - To date, 214,730 acres treated in Chaves County. About 96 percent kill overall. Because of dense foliage in arroyos only 50 percent kill noted. These areas will need retreatment. (N.M. Coop. Rpt.). UTAH - Melanoplus sanguinipes 75 percent of population. Up to 5 per square yard in some areas of Green Canyon and near Cornish, Cache County. Migrating from drying range into nearby crops. Treatments required in many areas. Controlled in alfalfa seed fields at Newton, Cache County. Migrated from drying range to alfalfa and other crops in various counties; crop injury increased. (Davis et al).

MONTANA - Adult grasshopper survey revealed 110,000 acres of private, Indian, and Forest Service lands infested in 10 counties. Acreage in Sanders County includes 1,000 acres infested with grasshoppers and Anabrus simplex (Mormon cricket). Dominant grasshopper species included Melanoplus sanguinipes, M. bivittatus, M. infantilis, Ageneotettix deorum, Camnula pellucida, and Aulocara elliotti. (Pratt). IDAHO - Through August 1, seven cooperative control programs completed for range species on 701,000 acres. Three additional programs at higher elevations in eastern part of State probable. Surveys indicate general population lighter than past two seasons. Economic populations scattered on small acreages. Populations from drying desert and range areas moved into crops. May cause damage in some areas before crop harvest completed. (Pollard). Population, mainly Melanoplus sanguinipes, about one mile long and up to 4 per square yard, crossed U.S. Highway 95 north of Riggins, Idaho County. (Portman).

NEVADA - Camnula pellucida adults ranged 10-60 per square yard on 1,000 acres of native hay at Hot Springs Ranch, Humboldt County. Treatments underway. (Rowe). M. bivittatus and M. sanguinipes ranged 10-15 per square yard on about 250 acres of alfalfa hay in Diamond Valley, Eureka County. Treatments applied. (Nev. Coop. Rpt.). OREGON - Undetermined nymphs and adults ate holes in upper leaves and blossoms of gladiolus in 3-acre planting near Jacksonville, Jackson County. (Westcott).

JAPANESE BEETLE (Popillia japonica) - TENNESSEE - Adult population and damage peaked in upper eastern areas. (Quillin). CALIFORNIA - Balboa Park infestation at San Diego, San Diego County, continued to produce additional beetles; 15 taken as of August 2. Survey continued with traps and visual inspection. Eradication procedures being developed. (Cal. Coop. Rpt.).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - About 142,000 acres economically infested in Harding County. Treatments currently under consideration. (N.M. Coop. Rpt.).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Adults heavily defoliated two soybean fields in Henry County. Controls applied. (Hartzog).

Turf and Pastures - GRASS WEBWORM (Herpetogramma licarsisalis) heavily damaged 5 acres of Kikuyu grass pasture at Kiahulu, Maui; as many as 15 larvae per square foot. Periphery and other pastures in area relatively unaffected. Large number of adults noted in untended Para grass (Brachiaria mutica) around perimeter of playground at Kaneohe, Oahu. Light trap collections on Oahu indicate gradual decrease in adult populations since peak collections 2 months ago; totals by month--May 232, June 143, July 92. (Miyahira, Shimoda).

General Vegetables - TOMATO PINWORM (Keiferia lycopersicella) infestation and damage ranged light to moderate in small planting of eggplant at Pearl City, Oahu; 20-30 percent of leaves with 1-3 larvae. (Miyahira, Kawamura).

Beneficial Insects - A SCELIONID WASP (Trissolcus basalis) parasitized all 94 eggs in single egg mass of Nezara virdiula (southern green stink bug) from foliage of daikon in early July at Waianae, Oahu. (Otsuka). Larvae of a LANTANA CERAMBYCID (Plagiohammus spinipennis) caused light girdling of wayside lantana at Wailuku, Maui. Fifty-four adults released at site during April and May this year. Girdling heavy on 50-60 percent of lantana plants within 50-foot radius of release site at Makaleha Valley, Oahu, where 81 adults released since April 1973. (Miyahira, Davis).

Records of a Few Aphids in Hawaii

M. D. Leonard*

In 1970, Harold H. Shepard of Arlington, Virginia, made 5 collections of aphids on Maui, Hawaii. Following his return, he gave me the specimens and I determined them as follows:

Dactynotus pseudambrosia Olive. Haleakali Mountain at about 10,000 feet elevation (at the crater viewing point) on Hypochaeris radiata June 27. This is a new State record.

Aphis oestlundi Gillette. As above but at 7,500 feet elevation on Oenothera sp. June 27. This is a new State record.

Caveriella aegopodii (Scopoli). As above but at about 2,000 feet elevation on Foeniculum sp. June 27.

Nasonovia (Hyperomyzus) lactucae (L.). Kaanapali Beach, on Sonchus sp. June 28.

Rhopalosiphum maidis (Fitch). Same locality on Echinocloa crus-galli June 28.

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DETECTION

A NOCTUID MOTH (*Spodoptera pecten* (Guenee) - WASHINGTON - Adult taken in blacklight trap at McChord Air Force Base, Tacoma, Pierce County. Trap located in front of Military Air Command terminal and serviced August 2, 1973, by D.M. Pike. Specimen probably escaped from aircraft. Determined by D.M. Pike and J.W. Patton. Confirmed by E.L. Todd. One previous collection of the species made at same location September 4, 1967. This noctuid is not known to occur in the United States.

S. pecten occurs in India, the Philippines, Korea, Thailand, *Malaysia*, and on Yonaguni Island in the southern Ryukyu Islands. It feeds on grasses and derris. In Malaysia, *S. pecten* has been noted as a pest of rice and has also been reported to damage the leaves of derris. Eggs are deposited on leaves of rice and covered with scales. During the period July 1, 1970, through June 30, 1971, *S. pecten* was intercepted at U.S. ports of entry on 164 occasions in Alaska, California, Hawaii, and Washington. During the period July 1, 1971, through June 30, 1972, this species was intercepted 75 times in the same States. No larvae have been found and this is not considered an established infestation at this time. (PPQ).

New State Records - APHIDS - *Dactynotus pseudambrosia*, *Aphis oestlundi* HAWAII - Maui. (p. 542). *Micromyzus formosanus* - ARIZONA - Cochise County. (p. 535). BROWN GARDEN SNAIL (*Helix aspersa*) - NEW MEXICO - Bernalillo County. (p. 532). CEREAL LEAF BEETLE (*Oulema melanopus*) - NEW JERSEY - Hunterdon County. (p. 540). A CHALCID WASP (*Brachymeria intermedia*) - NEW HAMPSHIRE - Merrimack County. MAINE - Oxford County. (p. 539).

New County Records - ALFALFA WEEVIL (*Hypera postica*) NEW MEXICO - Quay (p. 533). AN APHID (*Masonaphis lambersi*) WASHINGTON - Yakima (p. 537). AN ARMORED SCALE (*Aspidiotus spinosus*) FLORIDA - Highlands (p. 537). CEREAL LEAF BEETLE (*Oulema melanopus*) NEW JERSEY - Warren (p. 540). A COMBFOOTED SPIDER (*Latrodectus variolus*) MICHIGAN - Missaukee (p. 539). EUROPEAN CHAFER (*Amphimallon majalis*) OHIO - Huron (p. 540). FACE FLY (*Musca autumnalis*) NORTH CAROLINA - Durham, Person, Caswell (p. 538). HOLLYHOCK WEEVIL (*Apion longirostre*) NEW MEXICO - Harding (p. 537). A MOSQUITO (*Aedes sollicitans*) OHIO - Vinton (p. 538). WESTERN CORN ROOTWORM (*Diabrotica virgifera*) INDIANA - Huntington, Clinton. MICHIGAN - Jackson, Lenawee (p. 531).

CORRECTIONS

CEIR 23(30):485 - GRASSHOPPERS - Line 5: Melanopus femurrubrum should read Melanoplus femurrubrum.

CEIR 23(30):492 - MOSQUITOES - MINNESOTA - Mansonia perturbans should read *Coquillettidia* perturbans.

LIGHT TRAP COLLECTIONS

BL = blacklight
I = incandescent
MV = mercury vapor
O = other

	Tempera-ture °F.	Precip-itation (inches)	Type of trap	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
ARKANSAS (Counties)																								
Lee 7/25-31			BL						2	98														
Lonoke 7/18-24, 25-31			2BL							526														
ARIZONA																								
Mesa 8/23-30			BL	4						93								4		280		13	61	
COLORADO (County)																								
Weld 7/9-14			BL			3								7					4					
FLORIDA																								
Gainesville 7/27-8/2			BL					7		28						2				2	15	6	1	
ILLINOIS (County)																								
Ogle 7/24-30			2BL	128													200	322	606				257	
INDIANA (Counties)																								
Lawrence 7/19-25			BL	5	15										4	8	3	9	63					
Tippecanoe 7/19-25			BL	48	22												20	34	57				1	
IOWA																								
Beaconsfield 7/20-26			BL	207													80	8	100					
Gilbert 7/20-26			BL	19			9											4	17					
KANSAS																								
Goodland 7/30			BL				12			4								8	11				1	
Tribune 7/23, 26			BL	2			50			18								6	20		2	1		
KENTUCKY																								
Lexington 7/30-8/2			BL	6														8	18			36		
Princeton 7/30-8/2			BL	11						3						18			4			28	34	
MICHIGAN (Counties)																								
Lenawee 7/25-8/1			BL	38											17		148	19	126			26	17	
Monroe 7/25-8/1			BL	22											20		426	28	108			37	14	
MINNESOTA																								
Crookston 7/26-8/1			BL					83									1		7					
Fergus Falls 7/26-8/1			BL					33									3							

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
MISSISSIPPI																								
Stoneville 7/27-8/2	64-96	3.42	2BL	53	21			26	16	239					1	2		3	62	12	568	463	85	
MISSOURI																								
Portageville 7/19-8/2			BL	21						57							21	10	12		25	78		
NEBRASKA																								
Scotts Bluff 8/2			BL															4	15					
NEW HAMPSHIRE																								
Dover 7/28			BL																1					
Lee 7/29			BL	4															15					
NEW JERSEY																								
Cranbury 7/25-31			7BL	17													20						2	
Evesboro 7/25-31			7BL	41						4							371						4	
NORTH DAKOTA																								
Bismarck 7/30-31			BL											188					1					
Fargo 7/30,31,8/1			BL											53					13				8	
OHIO																								
Wooster 7/27-8/2			BL	43			12										316	36	265			3	4	
OREGON (Counties)																								
Benton 7/25-8/1			BL															5						
Jefferson 7/19-25			BL	25														4						
PENNSYLVANIA (Districts)																								
Central 7/21-30			BL	11	9													1	68					
Northeast 7/21-30			BL	3															4			3		
TENNESSEE (Counties)																								
Gibson 7/30-8/3			BL	59	7			12		1							1		23	36	4	420	48	
Madison 7/30-8/3			BL	19	4			1	1	4									8	14	2	92	29	
WEST VIRGINIA (Counties)																								
Kanawha 8/2			BL	5	1					1									17				5	
Monroe 7/31			BL		1												3		10				1	
WISCONSIN																								
Lancaster 7/24-31			BL	2													2	5	34					
Mazomanie 7/24-31			BL														111		4		4			

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Compiled by T. Perju[1] [2]

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